

FRIEND: Finding Risk in External News Data

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Background

- Since 2020, WorkSafeBC's Risk Analysis Unit has collaborated with Analytics Data Services and Innovation Services to create and deploy FRIEND (Finding Risk in External News Data).
- FRIEND is an innovative **machine learning-powered tool** designed for the acquisition and screening of worldwide news articles related to Occupational Health and Safety (OHS) incidents or pertinent information.
- It assists in channeling **risk signals** and prioritizing risks as part of data intelligence efforts. FRIEND specifically focuses on identifying risk signals associated with workplace incidents and emerging risks.
- The tool functions by pinpointing news articles, which are then subjected to **daily review and tagging by a team of OHS risk subject matter experts** to determine their relevance and novelty.
- The FRIEND machine learning component utilizes these tags to **refine its ability** to recognize relevant news articles.

Use of FRIEND outputs

The outputs from FRIEND are accessible through a Power BI* **dashboard**, which provides visual representations of **key insights**.

These insights encompass the frequency of risk signals, summarized according to:

- Risk occurrence
- Geographical distribution
- Topics, determined through generated keywords via topic modeling**.

*Interactive data visualization tool for analyzing and sharing business insights.

**Topic modeling is a statistical technique used in natural language processing that identifies and extracts underlying themes or topics from a collection of text documents, providing a structured way to understand and categorize large amounts of textual data.

Future plans

- The model undergoes ongoing refinement and enhancement, with the added ability to forecast risks linked to specific articles, ultimately diminishing reliance on manual tagging in subsequent iterations.
- As more advanced AI models emerge, we will assess the advantages of adopting them to bolster capabilities or accelerate processing.
- Additionally, we aim to broaden the scope of business applications for data acquired through user experience analysis and discovery.